Amendments to the Drawings

None

Remarks

Applicant acknowledges receipt of and confirms agreement with the contents of the Examiner's Interview Summary (mailed 11/21/2005) for the telephone interview held on 11/14/2005 in which the Examiner and Applicant's Agent participated.

The present invention is directed to a coolant delivery apparatus for a machine tool wherein the position of the coolant delivery apparatus comprising a plurality of coolant nozzles in fluid communication with a positionable coolant header is controllable such that coolant may be delivered to the machining zone of a tool even though the location of the machining zone of the tool may change such as during machining of a workpiece, or from one workpiece to another.

Applicant has previously amended claims 1 and 14 (and appropriate dependent claims) to recite the present invention comprises a "plurality" of coolant nozzles. Additionally, Applicant has previously incorporated the subject matter of claims 2 and 16 (now cancelled) into respective claims 1 and 14 to further define the claimed invention as including the plurality of nozzles in communication with a coolant header that is positionable along with the coolant nozzles. Most recently, Applicant has also amended claims 1 and 14 to indicate the "...coolant nozzles are attached to and in fluid communication with a coolant header...".

The current status of the claims is as follows:

1. Claim 11 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite.
2. Claims 1, 3-9, 13-15, 17 and 18 are rejected under 35 U.S.C. §102(b) as being clearly anticipated by EP 0 305 616.
3. Claims 11 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0 305 616 in view of Kalb (US 6,712,061).
4. Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0 305 616 in view of Mason (US 1,924,162).

Claim 11 has been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claim 11 has been amended to delete "wherein said plurality of coolant nozzles are attached to and in communication with a coolant header" which is redundant with respect to the existing language of claim 1. With this amendment, the rejected language "a coolant header" has, therefore, also been deleted.

Claims 1, 3-9, 13-15, 17 and 18 have been rejected under 35 U.S.C. §102(b) as being clearly anticipated by EP 0 305 616 (EP '616). This rejection is respectfully traversed.

EP '616 teaches a body member 16 with attached coolant nozzles 17 positionable about a tool 13 so as to direct coolant to a machining point. The rotational position of the body member 16 is determined by the position of the machine work table from which the machining point on the workpiece is calculated and a signal is then outputted to compute the angle of rotation of the body member 16 to direct coolant to the machining point (column 6, lines 10-50). The computation of the angle of rotation of the body member 16 varies depending on the workpiece shape and therefore must be determined at each instance of a change to a differently configured workpiece.

In contract, the present invention provides for repositioning of coolant nozzles based on movement of the tool in a synchronized manner along a machine axis. There is no dependence upon movement of the workpiece or a work table, the shape of the workpiece, or the need to separately calculate a formula at each change to a differently configured workpiece. Claims 1 and 14 have been amended to include the limitations originally introduced by claim 5 (now cancelled) which recites movement of the tool as the basis for repositioning the coolant nozzles. No such movement is anticipated by EP '616 and as such, withdrawal if the rejection of claims 1, 3-9, 13-15, 17 and 18 as being clearly anticipated by EP '616 is respectfully requested.

Claims 11 and 12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0 305 616 in view of Kalb (US 6,712,061).

EP '616 is discussed above and that discussion is hereby referred to and repeated.

Kalb teaches a wheeled trolley for carrying tools across a workpiece via a track and pulley/cable system. Figure 3 shows a tool support carriage 500 including coolant nozzles 512 and 513 which are supplied with cooling fluid via inlet 538 and threaded nipple 514 (column 9, lines 57-60). Also included in tool support carriage 500 is base 507 which provides an enclosure for fluid that might climb rotary shaft 509 especially when tool support carriage 500 is operated in an upside down position (column 10, lines 1-6). Additionally, while coolant nozzles 512, 513 are "positionable" due to the repositioning of tool support carriage 500 along crescents 470, 480 (Figure 1), the position of the coolant nozzles 512, 513 relative to the area of contact between the workpiece and the contact zone of the tool does not change which is contrary to the recitation of claim 1.

EP '616 teaches determining the position of the machine work table from which the machining point on the workpiece is calculated and a signal is then outputted to compute the angle of rotation of the body member 16 to direct coolant to the machining point. The computation of the angle of rotation of the body member 16 varies depending on the workpiece shape. Kalb teaches movement of a tool about a fixed arcuate path with the tool being incapable of repositioning to direct coolant to a changing area of contact. Where is the motivation to combine these teachings? EP '616 teaches a moving work table as the basis for calculating coolant nozzle orientation while Kalb teaches a tool with coolant nozzles moving along a fixed arcuate path with the coolant nozzles incapable of a change in orientation. Applicant sees no reasonable guidance or suggestion to combine these teachings and even if reasonable motivation to combine existed, for the sake of argument, the outcome surely would not be the claimed invention. Kalb simply fails to provide the teaching to rectify the deficiencies noted above with respect to EP '616.

The rejection of claims 11 and 12 as being unpatentable over EP 0 305 616 in view of Kalb is improper and withdrawal of the rejection is respectfully requested.

Claim 10 has been rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0 305 616 in view of Mason (US 1,924,162).

EP '616 is discussed above and that discussion is hereby referred to and repeated.

Mason discloses a machine for cutting fibrous sheet material wherein a rotary cutter is actuated in forward and return motion via a pair of cables secured to opposite ends of the cutter carriage. Mason has no disclosure pertaining to delivering coolant to a machining zone and as such comprises teachings that are completely non-analogous with respect to the present claimed invention. As with Kalb, discussed above, Mason teaches a moving tool which presents absolutely no guidance or motivation to modify the work table movement based computational method of directing coolant flow as taught by EP '616.

The rejection of claim 10 as being unpatentable over EP 0 305 616 in view of Mason is improper and withdrawal of the rejection is respectfully requested.

Conclusion

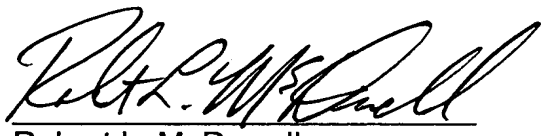
With the above remarks, Applicant believes the rejections based on EP '616 alone or in combination with Kalb or Mason have now been overcome. In this light, withdrawal of the rejections is respectfully requested and a prompt Notice of Allowance is earnestly solicited.

If the Examiner has any questions, she is cordially invited to telephone Applicant's Agent at (585) 461-8071. Should any additional fees be required in order that this paper, or any attachments hereto, be deemed a complete and timely response, the

Commissioner is hereby authorized to charge Deposit Account No. 07-1425 for any such fees.

Respectfully submitted,

THE GLEASON WORKS



Robert L. McDowell
Reg. No. 34,080
Patent Agent

Tel.: 585-461-8071
Fax: 585-461-4092
E-mail: Rmcdowell@gleason.com

The Gleason Works
1000 University Avenue
P.O. Box 22970
Rochester, New York 14692-2970

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence (along with any papers referred to as being accompanying, enclosed, attached, or submitted herewith) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on February 28, 2006 (Date of Deposit)

by Robert L. McDowell (Name of Applicant, Assignee or Registered Representative)

(Signature)

February 28, 2006 (Date of Signature)